

Birds

Importance

The National Park Service's mission is to manage park resources "unimpaired for future generations." Protecting and managing some of our nation's most significant natural resources requires basic knowledge of the condition of ecosystems and species that occur in national parks. Landbirds are a conspicuous component of many ecosystems and have high body temperatures, rapid metabolisms, and occupy high trophic levels. As such, changes in landbird populations may be indicators of changes in the biotic or abiotic components of the environment upon which they depend. Relative to other vertebrates, landbirds are also highly detectable and can be efficiently surveyed with the use of numerous standardized methods.

Status and Trends

With the exception of some pilot efforts at PECO in 2008, SOPN began monitoring birds in 2009. This effort is part of a collaboration among the Southern Plains, Sonoran Desert, and Chihuahuan Desert Networks. The overall goal of our

RESOURCE BRIEF



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Dickcissel

bird monitoring program is to detect biologically significant changes in population parameters over time. Details of our approach can be found in Powell et al. 2010. At FOLS, we surveyed each of 3 transects (Fig. 1) two times during the breeding season (Table 1). The specific objectives of our efforts are:

1. To estimate the proportion of sites occupied for most species in most parks. Occupancy is a measure of presence or absence of a species in space that, when evaluated across time, indicates changes in the distribution of a species.
2. To estimate parameters related to community dynamics, particularly species richness and species composition. Monitoring the richness and composition of native communities can provide valuable insights about changes in the overall health of the

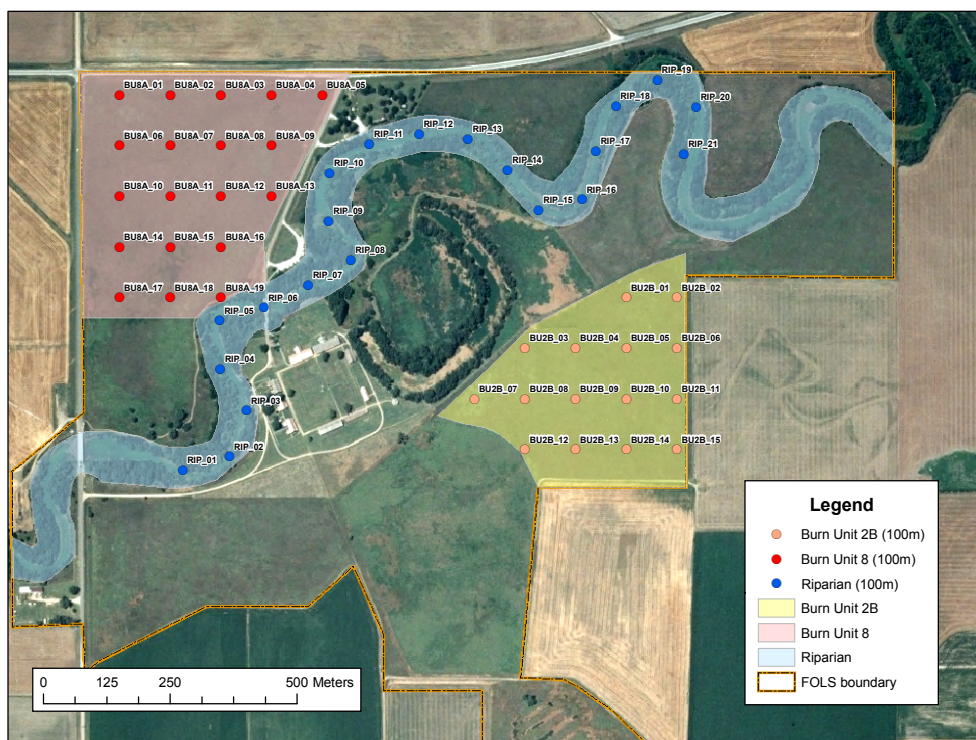


Figure 1. Bird sampling locations at Fort Larned NHS.

Table 1. Sampling dates at Fort Larned NHS

Location Name	Visit 1	Visit 2
BU2B	6/28/2009	6/29/2009
BU8A	6/24/2009	6/25/2009
RIP	6/26/2009	6/27/2009



system of concern.

3. To estimate density of the most-common species.

It is important to note that our objectives focus on long-term changes and trends, which requires a minimum number of years before meaningful estimates related to trend are feasible. Consequently, it is neither practical or feasible to conduct comprehensive analyses for each objective on an annual basis. For annual resource briefs, such as this one, will provide a basic data summary. At a more reasonable frequency of every 5 years, we will provide a comprehensive synthesis report that will go into much greater depth, including analyses for all objectives and interpretations that consider our results in broader ecological context.

During our 2009 surveys, we had 679 detections of birds of 31 species. Dickcissels were the most commonly detected species in the grasslands, while Baltimore Orioles were the most commonly detected species in the riparian woodlands.

Table 2. The bird species, species ID Code, and number of detections of birds during the 2009 survey at Fort Larned National Historic Site.

Species	Species Code	No. Detections	Species	Species Code	No. Detections
American Goldfinch	AMGO	1	House Wren	HOWR	42
American Robin	AMRO	29	Mourning Dove	MODO	58
Baltimore Oriole	BAOR	53	Northern Bobwhite	NOBO	1
Barn Swallow	BARS	13	Northern Cardinal	NOCA	8
Brown-Headed Cowbird	BHCO	26	Northern Flicker	NOFL	9
Blue Jay	BLJA	13	Orchard Oriole	OROR	21
Brown Thrasher	BRTN	23	Red-Breasted Grosbeak	RBGR	1
Common Grackle	COGR	24	Red-Headed Woodpecker	RHWO	15
Dickcissel	DICK	123	Ring-Necked Pheasant	RNEP	26
Downy Woodpecker	DOWO	2	Red-Winged Blackbird	RWBL	70
Eastern Kingbird	EAKI	7	Warbling Vireo	WAVI	1
Eastern Meadowlark	EAME	40	Western Kingbird	WEKI	10
European Starling	EUST	17	Western Meadowlark	WEME	22
Gray Catbird	GRCA	5	Yellow-Breasted Chat	YBCH	2
Great Egret	GREG	1	Yellow-Billed Cuckoo	YBCU	13
Grasshopper Sparrow	GRSP	3	Total		679